

Claims:

1. A strain of *Lactobacillus salivarius* which is adherent to Caco-2 and HT-29 cells, and is isolated from resected and washed human gastrointestinal tract, which

5 a) retains its ability to bind human epithelial cells and inhibits a broad range of Gram positive and Gram negative microorganisms;

b) secretes a product having antimicrobial activity into a cell-free supernatant, wherein said product having antimicrobial activity is produced only by growing cells and wherein said antimicrobial activity is destroyed by proteinase K and pronase E; and

10 c) maintains the inhibitory properties of a) and the secretory products of b) in the presence of physiological concentrations of human bile and human gastric juice.

2. A biologically pure culture of the strain according to Claim 1, wherein the strain has antagonistic activity against bacteria but which
15 does not inhibit closely related *Lactobacillus*.

3. A biologically pure culture of *Lactobacillus salivarius* strain UCC 1 (NCIMB 40830) or a variant thereof having the same antimicrobial and adhesive properties as said UCC 1.

20 4. A biologically pure culture of *Lactobacillus salivarius* strain UCC 118(NCIMB 40829) or a variant thereof having the same antimicrobial and adhesive properties as said UCC 118.

5. A health promoting product containing an isolated or purified strain of *Lactobacillus salivarius* according to any one of Claims 1-4 as a probiotic.

5 6. The biologically pure culture of the strain according to Claim 2, wherein said strain has antagonistic activity against a bacterium selected from the group consisting of *Listeria*, *Staphylococcus*, *Bacillus*, *Clostridium*, *Helicobacter*, *Pseudomonas*, *Salmonella*, *E. coli*, *Bacteroides* and *Streptococcus pneumoniae*.

10 7. A biologically pure culture of strain of *Lactobacillus salivarius* which is adherent to Caco-2 and HT-29 cells, and

a) retains its ability to bind human epithelial cells and inhibits a broad range of Gram positive and Gram negative microorganisms;

15 b) secretes a product having antimicrobial activity into a cell-free supernatant, wherein said product having antimicrobial activity is produced only by growing cells and wherein said antimicrobial activity is destroyed by proteinase K and pronase E;

c) maintains the inhibitory properties of a) and the secretory products of b) in the presence of physiological concentrations of human bile and human gastric juice; and

20 d) is isolated from resected and washed human appendix, large intestine or small intestine, and which is adherent thereto.